



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ghita LANZENDORFER et al.

**Confirmation No. 3976**

Group Art Unit: 1617

Appl. No. : 08/849,525

Examiner: Cotton, Abigail Manda

Filed : August 29, 1997

For : USE OF FLAVONOIDS AS IMMUNOMODULATING OR IMMUNO-  
PROTECTIVE AGENTS IN COSMETIC OR DERMATOLOGICAL  
PREPARATIONS

**REPLY BRIEF UNDER 37 C.F.R. § 41.41(a)(1)**

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop Appeal Brief-Patents  
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401 Dulany Street  
Alexandria, VA 22314

Sir:

This Reply Brief is in response to the Examiner's Answer mailed June 14, 2007, the period for reply extending until August 14, 2007.

In the Examiner's Answer, the Examiner maintains the grounds of rejection set forth in the Final Rejection.

Appellants note that the Examiner's Answer does not sufficiently address several of Appellants' arguments as to why the rejections are without merit. These deficiencies have prompted the present Reply Brief.

Appellants also note that this Reply Brief is being filed under 37 C.F.R. § 41.41(a)(1) and is directed to the arguments presented in the Examiner's Answer, and therefore must be entered unless the final rejection is withdrawn in response to the instant Reply Brief.

In order to avoid unnecessary repetition, the following response to the Examiner's arguments in the Examiner's Answer will be limited to issues which in Appellants' opinion are important enough to warrant a further comment. Accordingly, Appellants' silence with respect to any allegations set forth in the Examiner's Answer which are not specifically addressed below should by no means be construed as Appellants' admission that these allegations are of any merit.

### **REPLY**

I. Appellants note that the Examiner continues to essentially take the position that it would have been obvious to one of ordinary skill in the art to incorporate the alpha-glycosylrutin of Suzuki et al., U.S. Patent No. 5,145,781 (hereafter "SUZUKI") into the compositions of Evans et al., U.S. Patent No. 5,358,752 (hereafter "EVANS"). In this regard, the Examiner argues "that the motivation for combining the references rests in the fact that both Evans et al. and Suzuki et al. teach the desirability of providing compositions capable of protecting sun [sic] from UV ray exposure, and the effects thereof" and that SUZUKI "teaches the desirability of incorporating the alpha-glycosyl rutin into topical compositions where antioxidant and UV absorption activity is particularly desired, such as the skin care compositions of Evans et al.". Paragraph bridging pages 17 and 18 of Examiner's Answer.

Appellants respectfully submit that the Examiner's analysis as to what the disclosures of EVANS and SUZUKI are about is very superficial. Specifically, what EVANS actually teaches

is that the inventors thereof purified carnosic acid from Labiatae spice extracts through a series of selective solubilizations and precipitations and liquid column chromatography, that carnosic acid so obtained has a 99%+purity and can be oxidised to obtain the naturally occurring oxidative by-product, carnosol, and that these pure compounds are extremely effective in protecting the skin from peroxidation when applied topically. See, e.g., col. 2, lines 24-45.

In comparison, according to, e.g., the abstract of SUZUKI, the inventors thereof found that alpha-glycosyl rutin is formed at a high concentration by allowing a saccharide-transferring enzyme to act on a high-rutin content liquid in suspension or solution to effect saccharide-transfer reaction, that alpha-glycosyl rutin is superior in water-solubility, resistance to light and stability to intact rutin, as well as having the physiological activities as intact rutin has, and that thus, alpha-glycosyl rutin is favorably usable as a yellow coloring agent, antioxidant, stabilizer, fading-preventing agent, quality-improving agent, preventive, remedy, UV-absorbent and deterioration-preventing agent in foods, beverages, tobaccos, cigarettes, feeds, pet foods, pharmaceuticals for susceptible diseases, cosmetics including skin-refining agent and skin-whitening agent, and plastics, in addition to the use in vitamin P-enriching agents.

Accordingly, the only "link" between the disclosures of EVANS and SUZUKI is that EVANS describes a composition which is extremely effective in protecting the skin from peroxidation when applied topically (which characteristic is due to the presence therein of a particularly pure natural compound, carnosic acid, and compounds derived therefrom) and that SUZUKI mentions that the potential applications of the alpha-glycosyl rutin produced by the process described therein (which process is the core of the invention of SUZUKI as evidenced

by, for example, the fact that this process is the subject matter of all of the claims of SUZUKI) include, among many others, the use as a sunscreen in cosmetic compositions.

Appellants respectfully submit that in view of the facts set forth above and for at least all of the additional reasons set forth in the Appeal Brief it is only with hindsight that one can take the position that one of ordinary skill in the art would be motivated to add the alpha-glycosyl rutin of SUZUKI to the compositions of EVANS.

II. At the beginning of the first full paragraph of page 18 of the Examiner's Answer it is alleged that "one of ordinary skill in the art would have been motivated to provide the alpha-glycosyl rutin of Suzuki et al. into the compositions of Evans et al. with the expectation of forming a composition capable of forming a composition capable of providing protection of skin against UV rays."

Appellants submit that the composition of EVANS is characterized as "extremely effective in protecting the skin from peroxidation when applied topically", wherefore the question arises which additional effect and/or benefit one of ordinary skill in the art would expect to obtain by incorporating the alpha-glycosyl rutin of SUZUKI into the compositions of EVANS. The Examiner has not offered any comments or explanation in this regard.

Appellants note that at the bottom of page 18 of the Examiner's Answer it is stated that "it is considered that Evans et al's teaching that the antioxidants described therein are 'extremely effective' would not be sufficient to deter one of ordinary skill in the art from combining other ingredients known in the art to be effective in UV-ray absorption and antioxidation."

In this regard, it is pointed out that the question here is not whether or not one of ordinary skill in the art would be deterred from adding further anti-oxidants to the composition of EVANS but if one of ordinary skill in the art would be motivated (would have an apparent reason) to add further anti-oxidants and in particular, the alpha-glycosyl rutin of SUZUKI to the compositions of EVANS. In other words, the question is not if one of ordinary skill in the art could have added the alpha-glycosyl rutin of SUZUKI to the compositions of EVANS, but if he or she would have done so.

III. Appellants note that Examiner has not commented on Appellants' remarks regarding claim 48 (see particularly paragraph bridging pages 18 and 19 of the Appeal Brief), i.e., why SUZUKI allegedly renders it obvious to incorporate any flavonoid into the compositions of EVANS, although SUZUKI is concerned with only one specific flavonoid which is prepared by a specific process, i.e., alpha-glycosyl rutin.

IV. Regarding the rejection of claims 39-42, 55 and 56 and the alleged motivation to incorporate into the compositions of EVANS not only the alpha-glycosyl rutin of SUZUKI but additionally also the anti-oxidants of N'GUYEN et al., U.S. Patent No. 5,023,235 (hereafter "N'GUYEN I") and N'GUYEN et al., U.S. Patent No. 5,114,716 (hereafter "N'GUYEN II"), the Examiner appears to maintain the position set forth in the Final Office Action mailed on September 13, 2006.

Appellants respectfully submit that also in this case the Examiner's analysis and assertions are based on hindsight. In this regard, it is pointed out that if one wanted to stabilize the active ingredients of the composition of EVANS, the first choice would clearly be the antioxidants specifically recommended by EVANS for this purpose, i.e., ascorbic acid or related compounds such as erythorbic acid and their alkali metal salts. None of these compounds bears any resemblance to hydroxycinnamic acid, tocopherol and derivatives thereof, wherefore there is no apparent reason for one of ordinary skill in the art to replace the former compounds by those recited in the rejected claims. For this reason alone, the rejection of claims 39-42, 55 and 56 is without merit as well.

### **Conclusion**

Appellants respectfully submit that for at least all of the foregoing reasons and the additional reasons set forth in the Appeal Brief filed January 31, 2007 the Examiner has failed to establish a *prima facie* case of obviousness of rejected claims 37-56 with respect to EVANS in view of SUZUKI as evidenced by HARRISON and further in view of N'GUYEN I and/or N'GUYEN II. Accordingly, the request to reverse the rejection of claims 37-56 and to return the application to the Examining Group for prompt allowance is respectfully maintained.

Although no fee is believed to be required for entry of this Reply Brief, the Patent and Trademark Office is hereby authorized to charge any fee that is deemed to be necessary to Deposit Account No. 19-0089.

P29690.A09

Respectfully submitted,  
Ghita LANZENDORFER et al.

A handwritten signature in black ink, appearing to read "Neil F. Greenblum", written over a horizontal line.

Neil F. Greenblum

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August 2, 2007  
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